REMARKS

Applicants respectfully request reconsideration of the above-identified patent application in view of the amendments above and the remarks below.

Claims 2-4, 27-28, 37 and 44 are canceled herein. Claims 1, 5, 8, 10-12, 15-17, 38-40, 45 and 47-49 are amended herein. New claims 50-63 are added herein. Therefore, claims 1, 5-26, 29-36, 38-43, 45-63 are pending. Of these claims, claims 30-36 are non-elected claims, as explained further below. Accordingly, claims 1, 5-26, 29, 38-43, 45-63 are under active consideration.

Claim 15 stands objected to because of a "minor typographical error." In particular, the Patent Office states that "[i]n regards to claim 15, line 2, 'long' should be changed to --along-- in order to change a typographical error."

In response to the above, Applicants have amended claim 15 to replace "long" with "along." Accordingly, the objection has been overcome and should be withdrawn.

Claims 1, 3-7, 16-17, 28-29, 37-38, 40-42 and 44 stand rejected under 35 U.S.C. 102(e) "as being anticipated by Bouzid (USPN 6,449,039), as cited by applicant." In support of the rejection, the Patent Office states the following:

> In regards to claims 1 and 16, Bouzid discloses an apparatus for steering a beam of light (fig. 1) comprising an acousto-optical deflector (fig. 2, 31), and a spectrally dispersive element (fig. 2, 35), the deflector and the dispersive element being optically coupled to one another.
>
> In regards to claims 3 and 28, the dispersive element is positioned behind the deflector (fig. 1).
>
> In regards to claim 4, the dispersive element is oriented relative to the deflector so that the dispersive element disperses multi-chromatic light in a direction opposite to that dispersed by the deflector (column 3, lines 4-37).

In regards to claims 5 and 17, the dispersive element is constructed to disperse multi-chromatic light in an amount equally opposite to, for at least a portion of the multi-chromatic light that is dispersed by the deflector (column 6, lines 33-67).

In regards to claims 6-7 and 29, the dispersive element is a prism (column 3, lines 4-13).

In regards to claims 37, 40, and 44, Bouzid discloses a multi-photon excited fluorescence laser scanning microscope for forming a magnified image of a sample the sample containing fluorescent molecules which radiate photons of a first characteristic energy (column 3-4 lines 55-67 and 1-18, respectively and column 4, lines 46-50) comprising means for producing a scanning beam of ultrashort laser light pulses (column 3, lines 55-65 and column 4, lines 19-45) comprising a laser source (fig. 1, 11) for providing a beam of ultrashort laser light pulses comprising photons of a second characteristic energy, wherein the second energy is less than the first energy and wherein the simultaneous absorption of a plurality of the photons of the second characteristic energy by the fluorescent molecules causes the fluorescence of the molecules (column 4, lines 46-55), a first acousto-optical deflector optically coupled to the laser source for scanning the beam along a first axis (fig. 1, 33 and column 2, lines 46-55), a first spectrally dispersive element optically coupled to the first deflector, the first element being oriented relative to the first deflector so that the first dispersive element disperses multi-chromatic light in a direction opposite to that dispersed by the deflector (column 3, lines 4-37), means for focusing the scanning beam to a focal point within the sample to produce an illumination intensity sufficiently high only at focal point to produce molecular excitation and fluorescence of the sample by simultaneous absorption of at least two incident photons (fig. 1, 15, column 4, lines 1-5 and 46-50), means for detecting the fluorescence produced by the sample (fig. 1, 48), and means for using the detected fluorescence to form a magnified image of the sample (fig. 1, 54-55, and column 5, lines 30-39).

In regards to claims 38 and 41, the dispersive element is constructed to disperse multi-chromatic light in an amount equally opposite to, for at least a portion of the multi-chromatic light that is dispersed by the deflector (column 6, lines 33-67).

> In regards to claim 42, the scanning beam producing means further comprises means for scanning the sample in a direction perpendicular to the first axis (column 2, lines 46-55).

Insofar as the foregoing rejection pertains to claims 3-4, 28, 37 and 44, the rejection is moot in view of Applicants' cancellation herein of claims 3-4, 28, 37 and 44. Insofar as the foregoing rejection pertains to claims 1, 5-7, 16-17, 29, 38 and 40-42, Applicants respectfully traverse the foregoing rejection.

Claim 1, from which claims 5-7 depend, has been amended herein and now recites "[a]n apparatus for steering a beam of light, said apparatus comprising:

(a) an acousto-optical deflector; and

(b) a spectrally dispersive element positioned in front of said acousto-optical deflector, said spectrally dispersive element and said acousto-optical deflector being optically coupled to one another, said spectrally dispersive element being oriented relative to said acousto-optical deflector so that said spectrally dispersive element disperses multi-chromatic light in a direction opposite to that dispersed by said acousto-optical deflector."

Thus amended, claim 1 is neither anticipated by nor rendered obvious over Bouzid for at least the reason that Bouzid does not teach or suggest an apparatus for steering a beam of light that comprises, among other things, an acousto-optical deflector and a spectrally dispersive element coupled to the acousto-optical deflector, wherein the spectrally dispersive element is positioned **in front of** the acousto-optical deflector and is oriented relative to the acousto-optical deflector to disperse multi-chromatic light in a direction opposite to that dispersed by the acousto-optical deflector.

Instead, Bouzid discloses a system in which a prism (35) is positioned after an acousto-optical deflector (31). Moreover, Bouzid strongly teaches away from positioning the prism anywhere but after the acousto-optical deflector (see, for example, col. 6, lines 9-11, of Bouzid).

Claim 16, from which claims 17 and 29 depend, has been amended herein and now recites "[a] method of steering a beam of light, said method comprising the steps of:

(a) providing a beam of light;

(b) then, passing said beam of light through a spectrally dispersive element; and

(c) then, deflecting said beam of light using an acousto-optical deflector;

(d) wherein said spectrally dispersive element is oriented to disperse multi-chromatic light in a direction opposite to that dispersed by said acousto-optical deflector."

Thus amended, claim 16 is not anticipated by or rendered obvious over Bouzid for at least the reason that Bouzid does not teach or suggest a method of steering a beam of light that comprises, among other things, passing the beam of light through a spectrally dispersive element **before** deflecting the beam of light using an acousto-optical deflector.

Claim 38 has been amended herein to depend from claim 39, which the Patent Office has indicated in the outstanding Office Action defines patentable subject matter.

Claim 40, from which claims 41-42 depend, has been amended herein and now recites "[a] multi-photon excited fluorescence laser scanning microscope for forming a magnified image of a sample, said sample containing fluorescent molecules which radiate photons of a first characteristic energy, said multi-photon excited fluorescence laser scanning microscope comprising:

(a) means for producing a scanning beam of ultrashort laser light pulses, said scanning beam producing means comprising

(i) a laser source for providing a beam of ultrashort laser light pulses comprising photons of a second characteristic energy, wherein said second characteristic energy is less than said first characteristic energy and wherein the simultaneous absorption of a plurality of said photons of said second characteristic energy by said fluorescent molecules causes the fluorescence of said fluorescent molecules,

(ii) a first acousto-optical deflector optically coupled to said laser source for scanning said beam along a first axis,

(iii) a first spectrally dispersive element positioned in front of said first acousto-optical deflector and optically coupled to said first acousto-optical deflector, said first spectrally dispersive element being oriented relative to said first acousto-optical deflector so as to disperse multi-chromatic light in a direction opposite to that dispersed by said first acousto-optical deflector;

(b) means for focusing said scanning beam to a focal point within said sample to produce an illumination intensity sufficiently high only at said focal point to produce molecular excitation and fluorescence of said sample by simultaneous absorption of at least two incident photons;

(c) means for detecting the fluorescence produced by said sample; and

(d) means for using the detected fluorescence to form a magnified image of the sample."

Thus amended, claim 40 is neither anticipated by nor rendered obvious over Bouzid for at least the reason that Bouzid does not teach or suggest a multi-photon excited fluorescence laser scanning microscope that comprises, among other things, scanning beam producing means

comprising, among other things, a spectrally dispersive element positioned in front of an acousto-optical deflector.

Accordingly, for at least the above reasons, the foregoing rejection should be withdrawn.

Claims 1-4, 6, 16 and 27-28 stand rejected under 35 U.S.C. 102(b) "as being anticipated by Bowen et al. (USPN 5,128,798)." In support of the rejection, the Patent Office states the following:

> In regards to claims 1 and 16, Bowen discloses an apparatus for steering a beam of light (fig. 1A), comprising an acousto-optical deflector (fig. 1A, 12 or 13), and a spectrally dispersive element (fig. 1A, 12 or 13), the spectrally dispersive element and deflector being optically coupled to one another.
>
> In regards to claims 2 and 27, the spectrally dispersive element (fig. 1A, 12) is positioned in front of the acousto-optical deflector (fig. 1A, 13).
>
> In regards to claims 3 and 28, the spectrally dispersive element (fig. 1A, 13) is positioned behind the acousto-optical deflector (fig. 1A, 12).
>
> In regards to claim 4, the dispersive element is oriented relative to the deflector so that the dispersive element disperses multi-chromatic light in a direction opposite to that dispersed by the deflector (column 3, lines 36-67).
>
> In regards to claim 6, the dispersive element is a second acousto-optical deflector (column 3, lines 36-45).

Insofar as the foregoing rejection pertains to claims 2-4 and 27-28, the rejection is moot in view of Applicants' cancellation herein of claims 2-4 and 27-28. Insofar as the foregoing rejection pertains to claims 1, 6 and 16, Applicants respectfully traverse the foregoing rejection.

Claim 1, from which claim 6 depends, is neither anticipated by nor rendered obvious over Bowen et al. for at least the reason that Bowen et al. does not teach or suggest an apparatus for steering a beam of light that comprises an acousto-optical deflector and a spectrally dispersive

element, the acousto-optical deflector and the spectrally dispersive element being optically coupled to one another, wherein the spectrally dispersive element is positioned in front of the acousto-optical deflector and is oriented relative to the acousto-optical deflector so that **the spectrally dispersive element disperses multi-chromatic light in a direction opposite to that dispersed by the acousto-optical deflector**.

As best understood by Applicants, the Patent Office is apparently contending that acousto-optical deflector (12) of Bowen et al. may be regarded as the claimed spectrally dispersive element and that acousto-optical deflector (13) of Bowen et al. may be regarded as the claimed acousto-optical deflector. However, Applicants respectfully submit that such a reading of Bowen et al. is in error because, whereas claim 1 requires that the spectrally dispersive element disperse multi-chromatic light in a direction **opposite** to that dispersed by the acousto-optical deflector, deflector (12) is not arranged to disperse multi-chromatic light in a direction **opposite** to that dispersed by deflector (13), but rather, is arranged to disperse light in a direction **perpendicular** to that dispersed by deflector. As a result, whereas the claimed spectrally dispersive element serves to counteract the dispersion resulting from the acousto-optical deflector, deflector (12) of Bowen et al. does not similarly counteract the dispersive effect of deflector (13) of Bowen et al., but rather, merely disperses the light in a second (perpendicular) direction.

Claim 16 is patentable over Bowen et al. for at least the same types of reasons discussed above in connection with claim 1.

Accordingly, for at least the above reasons, the foregoing rejection should be withdrawn.

Claims 12-14, 18-26 and 43 stand rejected under 35 U.S.C. 103(a) "as being unpatentable over Bouzid (USPN 6,449,039) in view of Bowen et al. (USPN 5,128,798), both cited by applicant." In support of the rejection, the Patent Office states the following:

> In regards to claim 12, Bouzid discloses an apparatus for steering a beam of light comprising a first beam deflections means for deflecting a beam along a first axis (column 2, lines 46-55), comprising a first acousto-optical deflector (fig. 1, 33 AOD), and a first spectrally dispersive element, the first dispersive element and the first AOD being optically coupled to one another, the first element being oriented relative to the first AOD so that the element disperses multi-chromatic light in a direction opposite to that dispersed by the first AOD (column 3, lines 4-37), the first element being constructed to disperse multi-chromatic light, for at least a portion of the light, in an amount equal to that dispersed by the AOD (column 6, lines 33-67), and a second beam deflection means for deflecting the beam along a second axis, the second axis being different from the first axis (column 2, lines 46-55). Bouzid does not disclose that the second deflector comprises an acousto-optical deflector (AOD) and a spectrally dispersive element. However, it is well known in the art that two acousto-optical deflectors can be used together to deflect light in two different directions, and it would be well known to use two AOD's to deflect light in two directions. For example, Bowen discloses two acousto-optical deflectors, the first deflector used to deflect light in a first direction, and the second deflector used to deflect light in a second direction different from the first direction (column 3, lines 42-46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have both of the deflectors in Bouzid's device be acousto-optical deflectors.
>
> Furthermore, since Bouzid's invention concerns utilizing a dispersive element to correct for spatial dispersion in the AOD (Bouzid column 2, lines 38-45), it would have been obvious to have the second beam deflection means, which now comprises a second AOD, to also comprise a second spectrally dispersive element, the second element and second AOD being optically coupled to one another, the second element being oriented relative to the second AOD so that the second element disperses multi-chromatic light in a direction opposite to [that] dispersed by the second AOD (Bouzid column 3, lines 4-37), the second element being constructed to

disperse multi-chromatic light, for at least a portion of the light, in an amount equal to that dispersed by the second AOD (Bouzid column 6, lines 33-67) in order to correct for the spatial dispersion of the second AOD.

In regards to claim 13, the second axis is perpendicular to the first axis (Bouzid column 2, lines 46-55).

In regards to claim 14, the first beam deflections means is constructed to scan the beam over a plurality of contiguous locations along the first axis and where the second beam deflection means is constructed to scan the beam over a plurality of contiguous locations along the second axis (Bouzid column 4, lines 19-45).

In regards to claim 18, although it is disclosed that the beam of light is pulsed, it is well known in the art that a continuous light beam can also be used to scan a sample and cause the sample to fluoresce, and therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a continuous light beam instead of the pulsed light beam in Bouzid's apparatus in order to perform the same function of the light beam.

In regards to claim 19, the beam of light is a pulsed beam of light (column 3, lines 55-65).

In regards to claim 20 the beam of light is a beam of ultrashort light pulses (column 3, lines 55-65).

In regards to claim 21, the light pulses can have a pulse duration of less than one picosecond (column 3,l lines 62-63).

In regards to claim 22, the light pulses can have a pulse duration of greater than or equal to one picosecond (column 3, lines 59-61).

In regards to claims 23-26, it is up to the user, and up to the type of sample being fluoresced to determine what the bandwidth and the wavelength range of the laser light should be.

In regards to claim 43, Bouvid's multi-photon laser scanning microscope is disclosed above. Bouzid does not disclose that the means for scanning the sample in a direction perpendicular to the first axis comprises an acousto-optical deflector (AOD) and a spectrally

> dispersive element. However, it is well known in the art that two acousto-optical deflectors can be used together to deflect light in two different directions, and it would be well known to use two AOD's to deflect light in two directions. For example, Bowen discloses two acousto-optical deflectors, the first deflector used to deflect light in a first direction, and the second deflector used to deflect light in a second direction different from the first direction (column 3, lines 42-46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have both of the deflectors in Bouzid's device be acousto-optical deflectors.
>
> Furthermore, since Bouzid's invention concerns utilizing a dispersive element to correct for spatial dispersion in the AOD (Bouzid column 2, lines 38-45), it would be obvious to have the second beam deflection means, which now comprises a second AOD, to also comprise a second spectrally dispersive element, the second element and second AOD being optically coupled to one another, the second element being oriented relative to the second AOD so that the second element disperses multi-chromatic light in a direction opposite to [that] dispersed by the second AOD (Bouzid column 3, lines 4-37), the second element being constructed to disperse multi-chromatic light, for at least a portion of the light, in an amount equal to that dispersed by the second AOD (Bouzid column 6, lines 33-67) in order to correct for the spatial dispersion of the second AOD.

Applicants respectfully traverse the foregoing rejection. Claim 12, from which claims 13-14 depend, has been amended herein and now recites "[a]n apparatus for steering a beam of light, said apparatus comprising:

(a) first beam deflection means for deflecting said beam along a first axis, said first beam deflection means comprising

(i) a first acousto-optical deflector, and

(ii) a first spectrally dispersive element positioned in front of said acousto-optical deflector, said first spectrally dispersive element and said first acousto-optical deflector being optically coupled to one another, said first spectrally dispersive element being oriented relative to

said first acousto-optical deflector so that said first spectrally dispersive element disperses multi-chromatic light in a direction opposite to that dispersed by said first acousto-optical deflector, said first spectrally dispersive element being constructed to disperse multi-chromatic light, for at least a portion of said multi-chromatic light, in an amount equal to that dispersed by said first acousto-optical deflector; and

(b) second beam deflection means for deflecting said beam along a second axis, said second axis being different from said first axis, said second beam deflection means comprising

(i) a second acousto-optical deflector, and

(ii) a second spectrally dispersive element, said second spectrally dispersive element and said second acousto-optical deflector being optically coupled to one another, said second spectrally dispersive element being oriented relative to said second acousto-optical deflector so that said second spectrally dispersive element disperses multi-chromatic light in a direction opposite to that dispersed by said second acousto-optical deflector, said second spectrally dispersive element being constructed to disperse multi-chromatic light, for at least a portion of said multi-chromatic light, in an amount equal to that dispersed by said second acousto-optical deflector."

Thus amended, claim 12 is patentable over Bouzid in view of Bowen et al. for at least the reason that Bouzid and Bowen et al., taken individually or in combination, do not teach or suggest an apparatus for steering a beam of light that comprises, among other things, first beam deflection means for deflecting a beam along a first axis and second beam deflection means for deflecting the beam along a second and different axis, wherein said first beam deflection means comprises, among other things, an acousto-optical deflector and a spectrally dispersive element, the spectrally dispersive element being positioned in front of and optically coupled to the acousto-optical deflector,

the spectrally dispersive element being oriented relative to the acousto-optical deflector to disperse multi-chromatic light in a direction opposite to that dispersed by the acousto-optical deflector.

By contrast, as noted above, Bouzid discloses an arrangement in which a prism is positioned **behind**, instead of **in front of**, an acousto-optical deflector, and Bowen et al. discloses an arrangement in which a pair of acousto-optical deflectors are arranged to disperse light along **perpendicular** axes, as opposed to having the front acousto-optical deflector disperse light in a manner opposite to that dispersed by the second acousto-optical deflector.

Furthermore, Applicants respectfully disagree with the Patent Office's contention that it would have been obvious to utilize a second acousto-optical deflector in Bouzid as Bouzid appears to suggest away from the use of a second acousto-optical deflector in favor of using a galvanometer driven mirror or like device.

Claims 18-26 depend from claim 16. Claim 16 is patentable over each of Bouzid and Bowen et al. individually for at least the reasons discussed above, and Applicants respectfully submit that the combination of these two references still fails to cure all of the deficiencies noted above.

Claim 43 depends from claim 40. Claim 40 is patentable over Bouzid for at least the reasons given above. Bowen et al. fails to cure all of the deficiencies of Bouzid with respect to claim 40. Therefore, based at least on its dependency from claim 40, claim 43 is patentable over the applied combination of references.

Accordingly, for at least the above reasons, the foregoing rejection should be withdrawn.

Claims 46 and 48-49 stand rejected under 35 U.S.C. 103(a) "as being unpatentable over Bouzid (USPN 6,449,039)." In support of the rejection, the Patent Office states the following:

In regards to claims 46 and 48, Bouzid discloses a laser scanning microscope for forming a magnified image of a sample, the sample containing molecules (column 3-4 lines 55-67 and 1-18, respectively and column 4, lines 46-50) comprising means for producing a scanning beam of ultrashort laser light pulses (column 3, lines 55-65 and column 4, lines 19-45) comprising a laser source (fig. 1, 11) for providing a beam of ultrashort laser light pulses comprising photons of a first wavelength capable of interacting with the molecules to create photons of a second wavelength, a first acousto-optical deflector optically coupled to the laser source for scanning the beam along a first axis (fig. 1, 33 and column 2, lines 46-55), a first spectrally dispersive element optically coupled to the first deflector, the first element being oriented relative to the first deflector so that the first dispersive element disperses multi-chromatic light in a direction opposite to that dispersed by the deflector (column 3, lines 4-37), means for focusing the scanning beam to a focal point within the sample to produce an illumination intensity sufficiently high only at focal point to produce to generate photons of the second wavelength (fig. 1, 15, column 4, lines 1-5 and 46-50), means for detecting the photons of the second wavelength produced by the sample (fig. 1, 48), and means for using the detected photons to form an image of the sample (fig. 1, 54-55, and column 5, lines 30-39). Bouzid does not disclose that the microscope is a multi-harmonic generation laser scanning microscope, or that the sample contains molecules having the appropriate nonlinear susceptibility, however, the structure of the microscope is the same, and only the laser and the sample change to make this laser scanning microscope into a multi-harmonic generation laser scanning microscope, which would be up to the user. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to change the sample and the laser to change Bouzid's microscope to a multi-harmonic generation laser scanning microscope.

In regards to claim 49, Bouzid discloses a laser scanning microscope (column 3-4 lines 55-67 and 1-18, respectively and column 4, lines 46-50) comprising means for producing a scanning beam of laser light (column 3, lines 55-65 and column 4, lines 19-45) comprising a laser source (fig. 1, 11) for providing a beam of laser light (column 4, lines 46-55), a first acousto-optical deflector optically coupled to the laser source for scanning the beam along a first axis (fig. 1, 33 and column 2, lines 46-55), a first spectrally dispersive element optically coupled to the first deflector, the first element being oriented relative to the first deflector so that the first

> dispersive element disperses multi-chromatic light in a direction opposite to that dispersed by the deflector (column 3, lines 4-37), means for focusing the scanning beam to a focal point within the sample (fig. 1, 15, column 4, lines 1-5 and 46-50), non-confocal detection means for detecting multi-photon fluorescence produced by the sample (fig. 1, 48), and means for using the detected signal to form an image of the sample (fig. 1, 54-55, and column 5, lines 30-39). Bouzid does not disclose that the apparatus comprises confocal fluorescence detection means, and multi-harmonic generation detection means. However, it is well known in the art to have multiple detection units to detect different properties of the sample, connected to the same microscope, since the structure of the microscope does not change for each type of detection. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a confocal fluorescence detection means, and multi-harmonic generation detection means into Bouzid's laser scanning microscope, since the main structure of the microscope would not change, and in order to measure other properties of the sample being tested.

Applicants respectfully traverse the foregoing rejection.

With respect to claim 46, the Patent Office concedes that Bouzid does not disclose a multi-harmonic generation laser scanning microscope but argues that "the structure of the microscope is the same, and only the laser and the sample change to make this laser scanning microscope into a multi-harmonic generation laser scanning microscope, which would be up to the user. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to change the sample and the laser to change Bouzid's microscope to a multi-harmonic generation laser scanning microscope."

Applicants respectfully disagree. There is nothing in Bouzid that provides any motivation for making the type of modifications suggested by the Patent Office. It is well-settled that the prior art must teach or suggest the desirability of a proposed modification for the modification to be

obvious. The mere disclosure of a laser scanning microscope does not suggest a multi-harmonic generation laser scanning microscope.

Claim 48 has been amended herein and now recites "[a] multi-harmonic generation laser scanning microscope for forming a magnified image of a sample, the sample containing molecules having the appropriate nonlinear susceptibility, said multi-harmonic generation laser scanning microscope comprising:

(a) means for producing a scanning beam of ultrashort laser light pulses, said scanning beam producing means comprising

(i) a laser source for providing a beam of ultrashort light pulses comprising photons of a first wavelength capable of interacting with said molecules having the appropriate nonlinear susceptibility to create, by multi-harmonic generation, photons of a second wavelength,

(ii) a first acousto-optical deflector optically coupled to said laser source for scanning said beam along a first axis,

(iii) a first spectrally dispersive element positioned in front of said first acousto-optical deflector and optically coupled to said first acousto-optical deflector, said first spectrally dispersive element being oriented relative to said first acousto-optical deflector so as to disperse multi-chromatic light in a direction opposite to that dispersed by said first acousto-optical deflector;

(b) means for focusing said scanning beam at a focal point within said sample to produce an illumination intensity sufficiently high only at said focal point to generate, by multi-harmonic generation, photons of said second wavelength;

(c) means for detecting the photons of said second wavelength emitted from said sample; and

(d) means for using the detected photons of said second wavelength to form an image of the sample."

Thus amended, claim 48 is not rendered obvious over Bouzid for at least the reason that Bouzid does not teach or suggest a multi-harmonic generation laser scanning microscope comprising, among other things, scanning beam producing means comprising, among other things, a first spectrally dispersive element positioned in front of and optically coupled to a first acousto-optical deflector to disperse multi-chromatic light in a direction opposite to that dispersed by the first acousto-optical deflector.

Claim 49, which has been amended herein, is patentable over Bouzid for at least the same types of reasons given above in connection with claim 48.

Accordingly, for at least the above reasons, the foregoing rejection should be withdrawn.

Claims 8-11, 15, 39, 45 and 47 stand objected to "as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims."

In response to the above, Applicants have rewritten claims 8, 10, 11, 15, 39, 45 and 47 in independent form. Clam 9 depends from claim 8 and, therefore, does not need to be rewritten in independent form to overcome the present objection.

Accordingly, for at least the above reasons, the foregoing objection should be withdrawn.

New claims 50-53 depend from claim 8 and are allowable based at least on their respective dependencies. New claims 54-57 depend from claim 10 and are allowable based at least on their

respective dependencies. New claims 58-61 depend from claim 11 and are allowable based at least on their respective dependencies. Claim 62, from which claim 63 depends, is allowable for the same types of reasons as claim 15. None of the new claims add new matter.

In conclusion, it is respectfully submitted that the present application is now in condition for allowance. Prompt and favorable action is earnestly solicited.

If there are any fees due in connection with the filing of this paper that are not accounted for, the Examiner is authorized to charge the fees to our Deposit Account No. 11-1755. If a fee is required for an extension of time under 37 C.F.R. 1.136 that is not accounted for already, such an extension of time is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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Dated: April 20, 2004

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on April 20, 2004.

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